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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,847	01/05/2006	Adrianus Sempel	GB 030106	5407
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EXAMINER WILLIS, RANDAL L				
ART UNIT		PAPER NUMBER		
2629				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/563,847

Applicant(s)

SEMPEL ET AL.

Examiner

RANDAL WILLIS

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/02009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to application 10/563847 filed January 5th 2006. Claims 1-17 are currently pending and have been examined.

Response to Arguments

2. Applicant's arguments filed 6/02/2009 have been fully considered but they are not persuasive. Applicant argues that Kimura doesn't teach a dedicated switching block which enables the driver circuit's output to be selectively connected to the reference source or the output of the display device. However, Fig. 4 of Kimura shows switching circuits 436 and 439 which switch alternatively so that the outputs of driver circuits can be connected selectively to either the output Si or the video signal 109.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "wherein the number of controllable driver circuits is at least one greater than the number required for providing data to all data

conductors is indefinite, as the number that is required for providing data is not defined. For purposes of examining the limitation will be read as “at least one greater than the number of data conductors.”

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made

in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 11-13, 15-17 rejected under 35 U.S.C. 102(e) as being anticipated
by Kimura (2004/0085270).

Apropos claim 11, Kimura teaches:

A method of providing drive signals to the data conductors (Si, Fig. 4) of a display device during a data addressing period (Data supplied during setting operation, which is the same as addressing period [0212]), the display device comprising an array of display elements (402, Fig. 11a), the method comprising:

generating inputs to be provided to the data conductors in response to input data using a plurality of controllable driver circuits (437 Fig. 4) selected from a number of

controllable driver circuits which is at least one greater than the number required for providing inputs to all data conductors (437 and 438, Fig. 4);

simultaneously dynamically calibrating the remaining at least one further controllable driver circuit (109 supplies video data, which inherently dynamically changes as the video signal changes [0215]) using a reference driver circuit (Sets one of the driver circuits 437 or 438 with 109 while driving Si with the other, Fig. 4 [0212]),

wherein each of said plurality of controllable driver circuits includes a switching block (Switching block containing 436 and 439, Fig. 4) which enables the output of each of said plurality of controllable driver circuits to be connected selectively to the reference driver circuit during a first addressing period to perform a calibration operation and to respective output of the display device in a further addressing period to perform a driving operation (switch 439 and 436 switches the operation of the two circuits one to receive the charger from 109, while the other is connected to outputs Si, the operation of which is receiving and which is outputting is switched Fig. 4)

Wherein the calibration and driving operations for each of said plurality of controllable driver circuits are interchanged during successive addressing periods ([0116]).

Apropos claim 12, Kimura teaches:

A method as claimed in claim 11 for providing current drive signals to the data conductors, the display device comprising an array of current-addressed display elements (402, Fig. 11a), the controllable driver circuits (437, 438 Fig. 4) comprising

controllable current source circuits (See current sources in Fig. 4) and the reference driver circuit comprising a reference current source (109, Fig. 4), and wherein the method comprises generating input currents in response to the input data (Si currents derived from Video Data, Fig. 4).

Apropos claim 13, Kimura teaches:

A method as claimed in claim 11 wherein one driver circuit is used to provide the input to each data conductor (Si supplied current from only one of 437 or 438 at any one time).

Apropos claim 15, Kimura teaches:

A method as claimed in claim 12, wherein a plurality of current source circuits is used to provide the input current to each data conductor (current sources 555-558, Fig. 18A [0021]).

Apropos claim 16, Kimura teaches:

A method as claimed in claim 15, wherein the plurality of current source circuits (60) providing the input current to each data conductor is selected from a group (current sources 555-558, Fig. 18A) having a larger number of current source circuits, and the multiple number is formed from a different selection from the group at different times (Different sources selected based on signal [0021]).

Apropos claim 17, Kimura teaches:

A method as claimed in 11, wherein the reference driver circuit is used to calibrate each of the controllable driver circuits in a sequence (Calibrates 437, then 438, Fig. 4), and wherein the controllable driver circuits not being calibrated together provide the inputs to all data conductors (Switches are inversely connected, so when one is being set by 109, the other is providing input to the signal lines [0212]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura (2004/0085270).

Apropos claim 14, Kimura fails to explicitly teach

wherein the number of driver circuits (32,34,40) required for providing inputs to all data conductors is equal to a fraction of the number of data conductors, and wherein each driver circuit is for providing inputs to a group of data conductors in multiplexed manner.

However, Examiner takes official notice that the use of multiplexers in order to route the output of a single driver circuit to the buffers of multiple data lines is well known in the art and therefore would have been obvious to one of ordinary skill in the art at the time of the invention in order to save room in the driver IC.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RANDAL WILLIS whose telephone number is (571)270-1461. The examiner can normally be reached on Monday to Thursday, 8am to 5pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RLW

/Amr Awad/
Supervisory Patent Examiner, Art Unit 2629